

# Work Order ID 59937

Thursday, June 17, 2010 12:57:27 PM

Page 1

Item ID: D2933-1

Accept

Revision ID:

Item Name: Saddle LH In, 206

Start Date: 6/17/2010 Start Qty: 4.00

Required Date: 6/24/2010 Req'd Qty: 4.00

Reference:

Approvals: Process Plan: PH Date: 10-6-17 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \_\_\_\_\_ Stop \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2933	Rev C								

100



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

Program part number and batch number. ☐ 1-Inspect part number and batch number are programmed correctly. ☐ 2-Machine Step No 1 of Folio and visually inspect as per dwg D2933 & attached Dimension Sheet ☐ 3-Machine Step No 2 of Folio and visually inspect as per

0.00

0.00

B.A 10/06/29

4

P10

110



Mill Conv

Conventional Milling Machine

CONVENTIONAL MILLING MACHINE

Memo

Machine Keyway and inspect per attached dimension sheet

0.00

0.00

B.A 10/06/29

4

120



QC

Quality Control

QC1- Inspect dimensions to dimension sheet

Memo

0.00

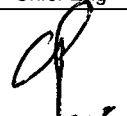



0.00

B.A 10/06/29

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2933-1 PAR #: \_\_\_\_\_ Fault Category: Machining NCR: Yes ☒ No ☐ DQA: \_\_\_\_\_ Date: 10.07.08  
 Resolution: Accepted Disposition: Use-As-Is QA: N/C Closed: \_\_\_\_\_ Date: 10.07.08

NCR: <u>59937</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/06/29	100	→ Small bore thickness in .143 only on one side .003 over tolerance → one hole is .585 from end of bore instead of .600 +/- .010	 10.07.05 PS/042	Part have moved during machining due to a wrong offset. Acceptable r.c operator error	K.A 10/06/29	 10/07/05	 10.07.05 PS/042	 10/07/05
		RL operation error. LOA						

NOTE: Date & initial all entries

# Work Order ID 59937

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Page 2

Item ID: D2933-1

Accept



Setup Start



Revision ID:

Item Name: Saddle LH In, 206

Stop



Start Date: 6/17/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 6/24/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set'Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

SD 10/07/05

4 0

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

H BR 10-7-6

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 11:00

320° FINISH TIME:

OVEN TEMPERATURE: 11:30

H BR 10-7-6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 59937**

Thursday, June 17, 2010 12:57:27 PM

Page 3

Item ID: D2933-1

Accept

Revision ID:

Item Name: Saddle LH In, 206

Start Date: 6/17/2010 Start Qty: 4.00

Required Date: 6/24/2010 Req'd Qty: 4.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location: 428

0.00

Packaging

Memo

0.00

Packaging

180

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control



⇒ JU

10/07/08

x4

0

10-7-7

(42)

sf

10-7-08

MF 10-7-7

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, June 17, 2010 12:57:31 PM

Page 1

Work Order ID: 59937

Parent Item: D2933-1

Parent Item Name: Saddle LH In, 206




Start Date: 6/17/2010

Required Date: 6/24/2010

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: B□00.06.26□New DWG rev (mpp 2069)□EC□  
IPP Rev:C As per Rev C 07-03-19 JLM □

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-001  Saddle Billet		Manufactured	No			100	Each	61.0000	1	4			

Location

Loc Qty

Loc Code

MAT

40

46409

40

MAT40

21

46409

21

4.000

J.A 10/06/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	59937
<b>Description:</b> 206 Saddle, Inboard, Left side		<b>Part Number:</b>	D2933-1
<b>Inspection Dwg:</b> D2933	<b>Rev:</b> C	<b>DSK:</b>	<b>Rev:</b>
			Page 1 of 1

### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
A	0.100	0.140		0.143	0.136	0.134	0.130	
B	0.100	0.140		0.125	0.132	0.130	0.128	
C	0.100	0.140		0.115	0.115	0.116	0.117	
D	0.210	0.230		0.225	0.225	0.225	0.225	
E	1.245	1.255		1.250	1.250	1.250	1.250	
F	1.245	1.255		1.250	1.250	1.250	1.250	
G	2.495	2.505		2.500	2.500	2.500	2.500	
H	0.510	0.515		0.51	0.51	0.51	0.51	
I	1.572	1.582		1.577	1.577	1.577	1.577	
J	2.495	2.505		2.500	2.500	2.500	2.500	
K	0.257	0.262		0.260	0.260	0.260	0.260	
L	0.312	0.317		0.314	0.314	0.314	0.314	
M	0.235	0.240		0.240	0.240	0.240	0.240	
N	0.100	0.140		0.110	0.110	0.110	0.110	
O	0.540	0.560		0.543	0.551	0.551	0.551	
P	0.490	0.510		0.500	0.500	0.499	0.503	
Q	3.715	3.725		3.720	3.720	3.720	3.720	
R	2.470	2.510		2.492	2.492	2.492	2.492	
S	0.240	0.270		0.258	0.256	0.256	0.256	
T	0.100	0.180		0.120	0.120	0.120	0.120	
U	1.625	1.635		1.630	1.630	1.630	1.630	
V	1.362	1.372		1.367	1.367	1.367	1.367	
W	0.316	0.321		0.317	0.317	0.317	0.317	
X	1.125	1.145		1.132	1.133	1.134	1.134	
Y	1.565	1.585		1.571	1.571	1.572	1.572	
Z	0.178	0.198		0.188	0.188	0.188	0.188	
AA								
AB								
AC								
AD								
AE								
Accept/Reject								

<b>Measured by:</b> M.A.	<b>Date:</b> 10/06/29
<b>Audited by:</b> S.S.	<b>Date:</b> 10/07/29
<b>Prototype Approval:</b> N/A	<b>Date:</b> N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Re-format; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	06.10.03	Removed DT8683, DT8686 & DT8690	KJ/JLM	
D	07.03.21	Revised per drawing revision C	KJ/JLM	
E	08.01.16	DT8695 A/B removed from dimension Y	KJ/EC/DD	

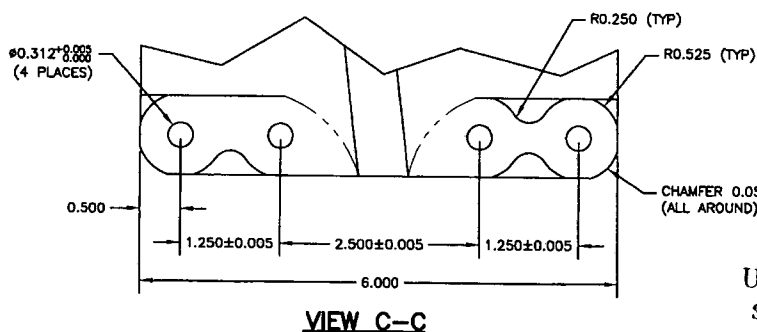
W/O:			WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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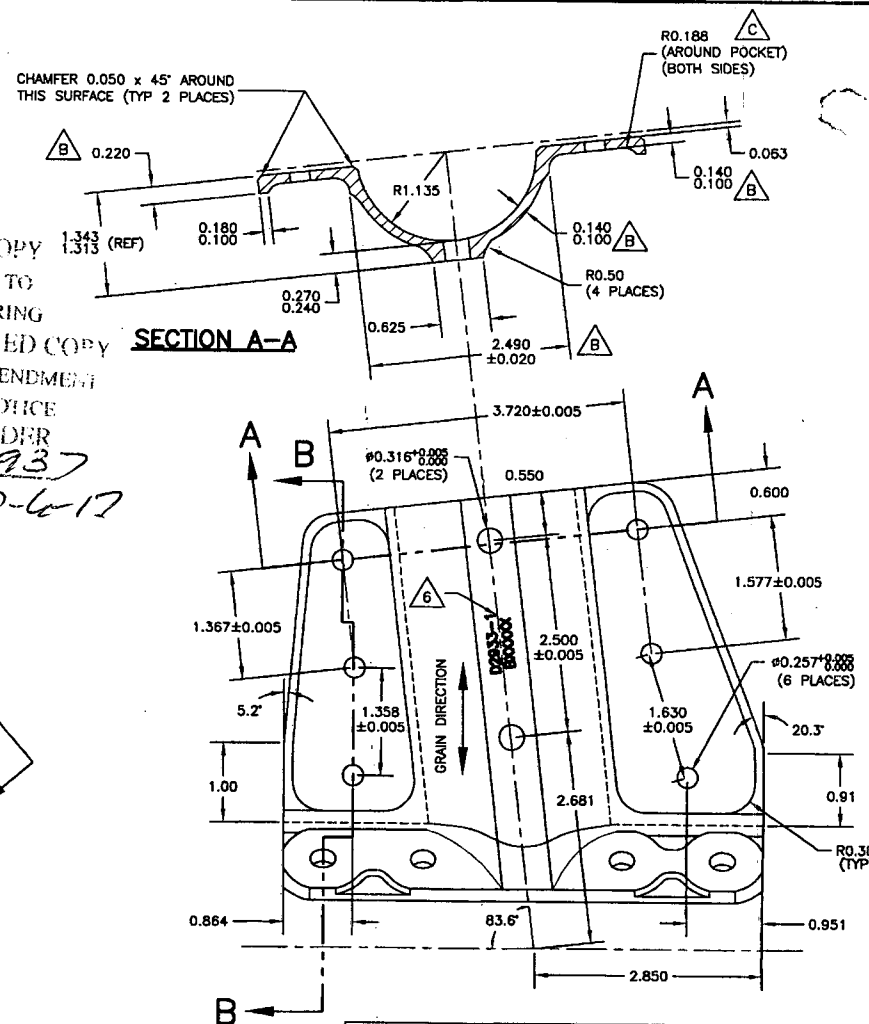
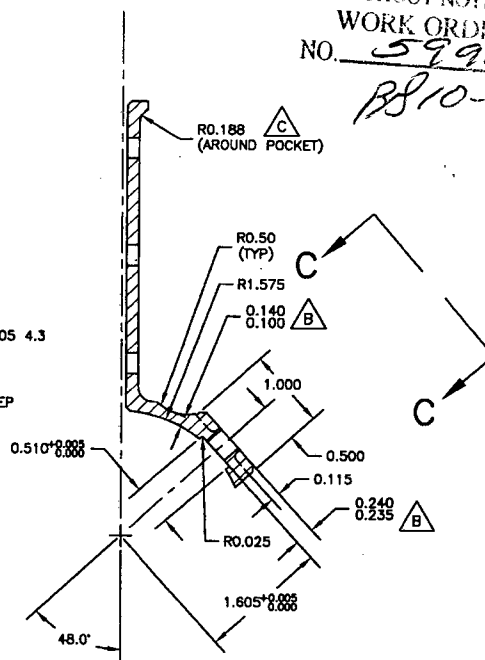
**NOTE:** Date & initial all entries



D2933-1 LH SADDLE (SHOWN)  
D2933-2 RH SADDLE (OPPOSITE)

NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)  
(MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 59937  
BS10-6-17

C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.10.29	NEW ISSUE
DESIGN	4	DRAWN BY CB
CHECKED	PH	APPROVED
DATE	06.11.09	TITLE
		SADDLE INSIDE
		SCALE
		2:3

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DART AEROSPACE USA, INC.

**DART** DART AEROSPACE USA, INC.  
BELLEVUE, WA

DRAWING NO.  
D2933

REV. C

SHEET 1 OF 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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